

Appl. No. : 10/735,413
Filed : December 12, 2003

REMARKS

This Amendment is in response to the Final Office Action mailed September 11, 2007 in the above captioned application. Claims 1, 3-24, and 40-45 were before the Examiner for consideration. Claims 25-39 were previously withdrawn from consideration, and have been cancelled herein. In this Amendment, Claims 1, 6, 11, 20, and 41 have been amended, no new claims have been added, and Claims 14-19, 23-40, and 42-45 have been canceled. No new matter has been added with these amendments. Claims 1, 3-13, 20-22, and 41, are pending for further consideration.

Suggested Allowable Subject Matter

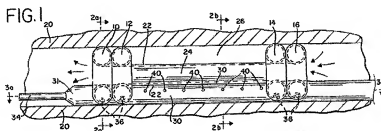
Applicant wishes to thank the Examiner for the suggestion of allowable subject matter. In order to expedite prosecution of the present application, applicant has chosen to pursue the subject matter suggested by the Examiner to be allowable.

Summary of the Office Action

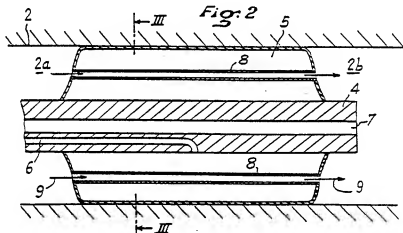
The Examiner rejected Claims 1, 3-13, 20-24, and 40-43 as being anticipated under 35 U.S.C. § 102(b) by Schweich, Jr. et al. (U.S. Pat No. 5,716,340). The Examiner rejected Claims 1, 4-10, 20-23, and 40-21 as being anticipated under 35 U.S.C. § 102(b) by Boussignac et al. (U.S. Pat. No. 5,000,734). The Applicant assumes that by listing Claims "40-21" in this rejection, the Examiner meant Claims 40-41, and the Applicant has responded based on this assumption. The Examiner rejected Claims 14-19 and 44-45 as being anticipated by Watkins et al. (U.S. Pat. No. 3,995,617). For the reasons discussed below, Applicant respectfully submits that the pending Claims are in condition for allowance.

Schweich and Boussignac each relate to catheters having inflatable structures for creating lumens attached thereto. In each of these references, the inflatable structures create lumens that define a passageway for blood flow to bypass the catheter. For example, see Figure 1 of Schweich, which is reproduced below. In the Schweich device, inflatable balloons 10, 12, 14, 16, and a sheath 22 extending therebetween, can be inflated to provide a blood flow lumen within the sheath. (Col. 6, line 58- Col. 7, line 5). Schweich discloses a containment pocket 26 adjacent the wall 20 of a vessel that has no flow such that it can be used to initiate the perfusion of medication within the

vasculature. (Col. 6, line 66-Col. 7, line 5). In particular, balloons 10, 12, 14, 16 form a seal at the vessel wall 20 preventing blood flow, other than through the lumen. Accordingly, blood flow is only provided through the lumen 24, and not between the Schweich device and the wall 20.



As can be seen from Figure 2 of Boussignac, which is reproduced below, the device disclosed by Boussignac likewise completely occludes a canal 2, such as a blood vessel, while providing conduits 8 therethrough for the flow of blood. In use, the Boussignac device can be inserted in a blood vessel and inflated such that it comes into contact with an inner wall of the blood vessel. A plurality of conduits 8 pass through the bag device of Boussignac and allow circulation of fluid 9 through the bag device. (Col. 2, lines 33-55).



Regarding Claim 1

In contrast to Schweich and Boussignac, Claim 1 recites:

A perfusion cannula system for directing blood through the vasculature of a patient, comprising:

a cannula body comprising a proximal end, a distal end, and at least one lumen extending therebetween;

a balloon located on an exterior surface of the cannula body, such that when the balloon is deployed a recess is defined between an outside surface of the balloon and an outside surface of the cannula body; and

means for deploying the balloon within the vasculature;

whereby space may be provided between a vessel wall and the recess when the cannula body resides within the patient to permit blood flow past the cannula body.

As noted above, neither Schweich nor Boussignac disclose all of the foregoing limitations. Instead each discloses a catheter in which the only passageway for blood flow is provided by a lumen within an inflatable device itself. Accordingly, Claim 1 is not anticipated by either Schweich or Boussignac. Claims 3-5 depend from Claim 1 and recite additional limitations thereon. Accordingly, Claims 3-5 are allowable for at least the reasons noted above with respect to Claim 1.

Regarding Claim 6

Claim 6 recites, a perfusion cannula system comprising, among other limitations, a "means for creating space between an outside surface of the cannula body and the vasculature to permit passive perfusion blood flow downstream from the cannula body external to the space creating means." In contrast, as noted above with respect to Claim 1, Schweich and Boussignac each disclose a catheter in which the only passageway for blood flow is provided by a lumen within the inflatable device itself.

Thus, for at least the reasons discussed above, Claim 6 is allowable over the cited art. Claims 7-10 depend from Claim 6 and recite additional limitations thereon. Claims 7-10 are therefore allowable for at least the reasons discussed above with respect to Claim 6.

Regarding Claim 11

Claim 11 recites a perfusion system comprising, among other limitations, a plurality of spacing balloons configured to create "at least one blood flow passage defined in part by outer surfaces of the multi-lumen cannula and at least two adjacent balloons around the multilumen cannula within the vasculature to permit blood flow through the blood flow passage past the multilumen cannula." As discussed above, neither Schweich nor Boussignac disclose a balloon that can create a blood flow passage as recited. Rather, Schweich and Boussignac each disclose inflatable members that only permit blood flow through a passage formed therein.

Accordingly, for at least the reasons discussed above, Claim 11 is allowable over the cited art. Claims 12-13 depend from Claim 11 and recite additional limitations thereon. Claims 12-13 are therefore allowable for at least the reasons discussed above with respect to Claim 11.

Regarding Claims 14-19, 44-45

The Examiner rejected Claims 14-19 and 44-45 as being anticipated under 35 U.S.C. § 102(b) by Watkins. In order to expedite prosecution on the present application by pursuing the subject matter indicated by the Examiner to be allowable, Applicant has canceled Claim 14 and Claims 15-19 and 42-45, which depend therefrom. Accordingly, this rejection is now moot. However, Applicant reserves the right to pursue these and similar claims at a later date.

No Disclaimers or Disavowals

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that the Applicant has made any disclaimers or disavowals of any subject matter supported by the present application.

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CONCLUSION

For the foregoing reasons, it is respectfully submitted that the rejections set forth in the outstanding Office Action are inapplicable to the present claims. Accordingly, issuance of a Notice of Allowance is most earnestly solicited.

Applicant respectfully traverses each of the Examiner's rejections and each of the Examiner's assertions regarding what the prior art shows or teaches. Although amendments have been made, no acquiescence or estoppel is or should be implied thereby. Any arguments in support of patentability and based on a portion of a claim should not be taken as founding patentability solely on the portion in question; rather, it is the combination of features or acts recited in a claim which distinguishes it over the prior art.

The undersigned has made a good faith effort to respond to all of the rejections in the case and to place the claims in condition for immediate allowance. Nevertheless, if any undeveloped issues remain or if any issues require clarification, the Examiner is respectfully requested to call Applicant's attorney, John F. Heal at (949) 721-7615 to resolve such issue(s) promptly.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

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